

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

## PCT

**Translation**

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:			Date of mailing (day/month/year)
Applicant's or agent's file reference		<b>FOR FURTHER ACTION</b> See paragraph 2 below	
International application No. <b>PCT/RU2004/000030</b>	International filing date (day/month/year) <b>03.02.2004</b>	Priority date (day/month/year) <b>18.08.2003</b>	
International Patent Classification (IPC) or both national classification and IPC			
Applicant <b>OBSHESTVO S OGRANICHENNOI OTVETSTVENNOSTYU FIRMA RADIUS-SERVIS</b>			

1. This opinion contains indications relating to the following items:

- |                                     |              |  |
|-------------------------------------|--------------|--|
| <input checked="" type="checkbox"/> | Box No. I    | Basis of the opinion   |
| <input type="checkbox"/>            | Box No. II   | Priority   |
| <input type="checkbox"/>            | Box No. III  | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability   |
| <input type="checkbox"/>            | Box No. IV   | Lack of unity of invention   |
| <input checked="" type="checkbox"/> | Box No. V    | Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/>            | Box No. VI   | Certain documents cited  |
| <input type="checkbox"/>            | Box No. VII  | Certain defects in the international application   |
| <input type="checkbox"/>            | Box No. VIII | Certain observations on the international application  |

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/RU	Authorized officer
Facsimile No.	Telephone No.

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Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐

This opinion has been established on the basis of a translation from the original language into the following language

\_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

☐

a sequence listing

☐

table(s) related to the sequence listing

b. format of material

☐

in written format

☐

in computer readable form

c. time of filing/furnishing

☐

contained in the international application as filed.

☐

filed together with the international application in computer readable form.

☐

furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

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Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims	1-2	YES
	Claims		NO
Inventive step (IS)	Claims	1-2	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-2	YES
	Claims		NO
2. Citations and explanations:			
<p>The following documents are cited in the search report:</p> <p>D1: RU 2186923 C2</p> <p>D2: SU 905411 A</p> <p>D3: RU 2103474 C1</p> <p>D4: RU 2115792 C1</p> <p>D5: US 4745982 A</p> <p>D6: US 5343966 A</p> <p>D1 is the prior art closest to the device according to claim 1.</p> <p>An adjuster of angle and reactive moment of a gerotor motor with spindle and drill bit in a bent string of drill pipes is known from D1, consisting of a central hollow element to which are connected three hollow tubular non-uniaxial elements, each of which has an through inner hole. The inner hollow element is located in the centre between the first and second elements, and the first and second tubular elements are connected to the inner hollow element with use of thread. The first hollow tubular element is connected by thread to the spindle, the second hollow tubular element is connected by thread to the engine housing, the</p>			

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Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

central hollow element is connected to the inner hollow element by grooves.

The device according to claim 1 differs from the known device in that the central hollow element and the first hollow tubular element in the plane of bend of the drill pipe string have contact segmental sections situated on opposite sides with respect to the meridian plane of the spindle. The distance between the near-in edges of the contact segmental sections along the central axis of the first hollow tubular element is equal to or greater than the outer diameter of the spindle. The contact segmental section of the first hollow tubular element is turned in the meridian plane of the spindle in the opposite direction with respect to the effect of the reactive moment from the drill bit.

These distinctive features are not known from the prior art, and therefore the claimed adjuster of angle and reactive moment of a gerotor motor with spindle and drill bit in a bent drill pipe string according to claims 1-2 meets the requirements of novelty and inventive step.

Claims 1-2 meet the requirement of industrial applicability.